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11
12 UNITED STATES DISTRICT COURT
13 CENTRAL DISTRICT OF CALIFORNIA
14 SOUTHERN DIVISION

15 POLARIS POWERLED
16 TECHNOLOGIES, LLC
17 Plaintiff,
18 v.
19 VIZIO, INC.
20 Defendant.

Case No. 8:18-cv-01571-JVS-DFM
**VIZIO, INC.'S OPENING CLAIM
CONSTRUCTION BRIEF**
Date: October 24, 2019
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Judge: Honorable James V. Selna

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1 I. INTRODUCTION

2 Defendant VIZIO, Inc. (“VIZIO”) hereby submits its opening claim
3 construction brief for the nine terms at issue from U.S. Patent No. 8,223,117 (the
4 “’117 patent”).¹ The parties did not propose briefing any terms from U.S. Patent
5 No. 7,239,087 as part of this process, though they did identify terms for
6 construction.

7 A. Background

8 The ’117 patent is entitled “Method and Apparatus to Control Display
9 Brightness with Ambient Light Correction.” *Id.* The application leading to the ’117
10 patent was filed on December 17, 2008, issued on July 17, 2012, and claims priority
11 to an application filed on February 9, 2004.

12 Ambient light detection and display brightness adjustment were well known
13 at the time of the ’117 patent. Ex. 1 at 1:18-56; Ex. 5 (Katona Decl.) at ¶ 13. In
14 general, the ’117 patent is directed to a specific implementation of “selective
15 ambient light correction” for a visible display that adjusts for user input and keeps
16 the brightness level of the visible display above a “predetermined level” when the
17 ambient light level “decreases to approximately zero.” Ex. 1 at cl. 1.

18 Polaris asserts independent claims 1 and 15, as well as claims 2, 4, 5, 6, 7, 9,
19 and 13 which depend from claim 1, and claims 16 and 18, which depend from claim
20 15. Claim 1 is an apparatus claim for a “brightness control circuit” comprising four
21 different claim elements: (1) a “first input configured to receive a user input
22 signal”; (2) a “light sensor configured to sense ambient light” and output a “sensing
23 signal”; (3) a “multiplier configured to” generate a combined signal based on the
24 input and sensing signal; and (4) a “dark level bias configured to adjust the
25

26 ¹ The parties previously identified “overdrive clamp circuit” as one of their ten
27 terms for construction (*see* Dkt. 78 at 3), but VIZIO has notified Polaris that it will
28 agree to Polaris’s proposed construction of that term to narrow the issues in dispute.

combined signal to generate a brightness control signal” that is used to control the brightness of a visible display. Ex. 1 at cl. 1. These four components comprise the claimed circuit, which performs “selective ambient light correction” by “maintain[ing] [the brightness control signal] above a predetermined level when the ambient light level decreases to approximately zero.” *Id.* Claim 1 is below:

1. A brightness control circuit with selective ambient light correction comprising:
 - a first input configured to receive a user signal indicative of a user selectable brightness setting;
 - a light sensor configured to sense ambient light and to output a sensing signal indicative of the ambient light level;
 - a multiplier configured to selectively generate a combined signal based on both the user signal and the sensing signal; and
 - a dark level bias configured to adjust the combined signal to generate a brightness control signal that is used to control a brightness level of a visible display such that the brightness control signal is maintained above a predetermined level when the ambient light level decreases to approximately zero.

Claim 15 recites a set of similar method steps for receiving a user input signal, multiplying that signal with a sense signal indicating the ambient light level, and adjusting that signal with “a dark level bias” to generate a brightness control signal. *Id.* at cl. 15. As with claim 1, these steps “selectively provide ambient light correction” in a visible display and thereby “maintain[] [the brightness control signal] above a predetermined level when the ambient light level decreases to approximately zero.” *Id.*

B. Person of Ordinary Skill in the Art

VIZIO proposes the following definition of a person of ordinary skill in the art:

A person of ordinary skill in the art at the time of filing (2004) would have at least a bachelor’s degree in electrical engineering, physics, optics or a related field, and at least three (3) years of further practical

1 or educational experience working with analog circuit design, lighting
2 design, and/or optical sensors.

3 While Polaris has not proposed a definition in this case yet, in related litigation
4 involving the '117 patent, Polaris proposed the following:

5 A person of ordinary skill in the art at the time of the invention of the
6 '117 patent would have at least a bachelor's degree in electrical
7 engineering, physics, or computer science, or 2-4 years of experience
8 in the field of visual displays and related technologies.

9 Ex. 3 (*Samsung* Claim Construction Order) at 10. For the purpose of resolving the
10 claim-construction disputes presented here, VIZIO does not contend that there is a
11 meaningful difference between the proposals.

12 **II. ARGUMENT**

13 **A. Claims 1, 14, 15: “Ambient Light”**

VIZIO's Construction	Polaris's Construction
“light surrounding a visible display”	Plain and ordinary meaning

15 The parties dispute whether “ambient light” should be given a construction.
16 VIZIO's construction is straightforward, consistent with the specification, and will
17 be useful to the jury members who may not be familiar with what “ambient light”
18 means in the context of the claims (*i.e.*, it is not limited to “natural light” or
19 “background light”). VIZIO's construction is also consistent with the meaning of
20 that term as known to a person of ordinary skill. Ex. 5 (Katona Decl.) at ¶ 26-31.

21 As used in the '117 patent claims and specification, “ambient light” is
22 relevant to the appearance of a visible display because it “reflects off the surface of
23 the LCD... which reduces the display contrast to give the LCD a washed-out
24 appearance.” Ex. 1 at 1:27-30. As the specification describes, it was well known in
25 the art that “increasing the brightness of the backlight for the LCD, thereby making
26 the light provided by the LCD brighter in comparison to the reflected light off the
27 LCD surface” was a way to combat this “washed-out appearance”: “the backlight
28

1 should be adjusted to be brighter for high ambient lighting conditions and less bright
2 for low ambient lighting conditions.” *Id.* at 1:30-36; Ex. 5 (Katona Decl.) at ¶ 28.

3 VIZIO’s construction gives context to the jury so that it can understand *what*
4 ambient light is when evaluating non-infringement and invalidity—*i.e.* the light
5 surrounding the visible display. VIZIO’s construction has two parts, neither of
6 which Polaris appeared to dispute during the parties’ meet and confers.

7 **First**, VIZIO’s construction specifies that the ambient light is light
8 surrounding the “visual display” recited in the claims—not other ambient light, such
9 as ambient light simply present in a room not affecting the visual display. This is
10 uncontroversial: Polaris does not dispute that the claimed “visual display” is the
11 proper reference point for determining what light is relevant “ambient light.” Nor
12 could it: both independent claims recite that “selective ambient light correction”
13 performed by the system or method is “used to control the brightness level of a
14 visible display” and is measured by a part of that display (the “light sensor”). Ex. 1
15 at cl. 1, 15. Similarly, the specification is unequivocal that a primary goal of the
16 alleged invention is to control the visible display’s brightness to adjust for ambient
17 lighting in various ways. Ex. 1 at 1:25-37.

18 **Second**, VIZIO’s construction specifies that ambient light is all light
19 surrounding the visual display, including light produced by the display itself. As
20 reflected in the ’117 specification, televisions are themselves sources of significant
21 ambient light. Ex. 1 at 1:24-25 (“Backlight is needed to illuminate a screen”;
22 referring to “the light produced by the LCD” and “the light provided by the LCD”);
23 Ex. 5 (Katona Decl.) at ¶ 28-30. Polaris indicated that it did not disagree that
24 “ambient light” includes light from the television itself on the parties’ meet and
25 confers. This is also consistent with the understanding a person of ordinary skill in
26 the art would have of the term. Ex. 5 (Katona Decl.) at ¶ 30.

27 While Polaris did not articulate a specific issue with VIZIO’s proposed
28 construction during the meet-and-confer process, it indicated it may disagree with

1 VIZIO’s inclusion of “surrounding” in the construction. As set out above, however,
2 both the specification (Ex. 1 at 1:25-37) and the claims make clear that the visible
3 display is the relevant reference point and the goal of measuring “ambient light” is
4 to control the brightness of the display, not to address light not affecting the display,
5 such as light in another room. Ex. 1 at cl. 1, 15. Moreover, Polaris cites to extrinsic
6 evidence in support of its position, but this evidence in fact supports VIZIO’s
7 construction. Polaris cites Hargreaves Communication Dictionary which states that
8 “ambient” means “that which *surrounds or encircles* a defined region” and further
9 defines “ambient light” as “light present in the environment *around* a detecting
10 device.” Ex. 4 at POLARIS_0286009 (emphasis added).

11 Polaris’s only other objection to VIZIO’s construction appears to be that
12 Polaris does not believe the term requires any construction at all. But the ’117
13 patent defines ambient light in a particular way and describes the role ambient light
14 plays in the claimed system as critically significant to the alleged invention—
15 indeed, the preamble of both independent claims specifies that the claimed invention
16 is directed to “selective ambient light correction.” Ex. 1 at cl. 1; 1:24-36. There is
17 no reason to leave ambiguity for the jury members who may think that ambient light
18 refers only to “natural light” or “background light,” and not all light surrounding a
19 visible display, including light from the display itself. *See, e.g., Apple, Inc. v.*
20 *Samsung Elecs. Co.*, 2012 WL 2993856, at *4 (N.D. Cal. July 20, 2012) (adopting
21 “a carefully worded construction [of ‘electronic document’ to] avoid the potential
22 jury confusion”). The Court should adopt VIZIO’s construction of “ambient light.”

23 **B. Claim 1: “Configured To”**

VIZIO’s Construction	Polaris’s Construction
Plain and ordinary meaning	“actually programmed or implemented with hardware or software to”

1 The parties dispute the proper construction of “configured to,” a commonly
2 used term of art in patent drafting. “[T]he term ‘configured to’ is a term used by
3 patentees in nearly every field of art.” *See, e.g., Radware Ltd. v. A10 Networks,*
4 *Inc.*, 2014 WL 1572644, at *12-*13 (N.D. Cal. Apr. 18, 2014). VIZIO proposes
5 that the term be given its plain and ordinary meaning in the context of the claims,
6 consistent with the common practice for this term. Polaris proposes a broad
7 construction that is inconsistent with the plain and ordinary meaning and conflicts
8 with the intrinsic evidence.

9 Courts routinely adopt a plain and ordinary meaning for “configured to” as a
10 patent term of art. “Configured to” is generally understood to have a plain and
11 ordinary meaning that is context dependent and implies a claim element is arranged
12 in a particular way or designed to perform a particular function. *See, e.g., Mitek*
13 *Systems, Inc. v. TIS Am. Inc.*, 2014 WL 3891237, at *2 (D. Del. Aug. 6, 2014)
14 (reading “the plain meaning of ‘configured’” as consistent with “arranged or set-up
15 to perform a specified function.”); *Intellectual Ventures I LLC v. Altera Corp.*, 2013
16 WL 3913646, at *7 (D. Del. July 26, 2013) (construing “configured to” to have a
17 plain and ordinary meaning of “to set up for operation especially in a particular
18 way”); *SwimWays Corp. v. Zuru, LLC*, 2014 WL 934447, at *12-13 (E.D. Va. Mar.
19 10, 2014) (for claims directed to a toy “configured to be propelled through a liquid”
20 ruling that “configured to” would be given its plain and ordinary meaning, and that
21 it “required[d] not merely being capable of being configured but rather being
22 actually configured”); *Solocron Media, LLC v. Verizon Communications Inc.*, 2015
23 WL 1011310, at *11-*12 (E.D. Tex. Mar. 5, 2015) (construing “configured to” to
24 have its plain meaning of not merely be capable of, but actually configured to do).

25 *Wistron Corp. v. Samsung Electronics Co., Ltd.*, 2008 WL 5055545 (N.D.
26 Cal. Nov. 25, 2008) is illustrative of these cases. There, the court found the plain
27 and ordinary meaning of “the term ‘configured to receive’ is ‘designed to receive.’”
28 *Id.*, at *16. The Court reasoned that “[t]he term does not need further construction

1 because there is a commonly understood and apparent meaning which can be
2 applied.” *Id.*

3 The same is true here. VIZIO’s proposal to apply the plain and ordinary
4 meaning of “configured to” is consistent with the common interpretation of
5 “configured to” in patent claim drafting. Moreover, there is no indication in the
6 specification or the claims that “configured to” should be given anything other than
7 its plain and ordinary meaning as a patent drafting term of art that is dependent on
8 the context of its use. The law is plain that unless the “patentee sets out a definition
9 and acts as his own lexicographer” or “disavows the full scope of a claim term”
10 during prosecution, the plain and ordinary meaning controls. *Thorner v. Sony*
11 *Computer Entertainment Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012). Neither
12 condition is met here.

13 Specifically, “configured to” appears in claim 1 of the ’117 patent and
14 modifies each of the four components of the claimed “brightness control circuit”:
15 (1) the “first input configured to” receive user input; (2) the “light sensor configured
16 to” sense ambient light; (3) the “multiplier configured to” generate a combined
17 signal from the input and light sensor; and (4) the “dark level bias configured to”
18 generate the brightness control signal that controls the brightness of the visible
19 display. “Configured to” also appears in dependent claims 8, 9, 12, and 13, in each
20 case modifying a specific component of the brightness control circuit as well—“a
21 shut down circuit configured to” (claim 8); “second input configured to” (claim 9);
22 “a digital-to-analog converter configured to” (claim 12); and “an amplifier
23 configured to” (claim 13). The phrase does not appear anywhere else in the patent;
24 it is only used as a patent drafting term of art applied to the recited elements in claim
25 1 and its dependents. VIZIO’s proposal for “configured to” is thus consistent with
26 the claims and specification, which provide no reason to treat “configured to” as
27 having anything other than its plain and ordinary meaning.

1 Polaris’s proposed construction, in contrast, is a backdoor attempt to broaden
2 the meaning of every claim element to which it applies to include implementations
3 in either hardware *or* software, without any basis in the claims or specification for
4 doing so and without taking into account the context of each claim limitation. As
5 just one example, Polaris’s construction would modify the term “an amplifier
6 configured to generate the sensing signal” in claim 13 to include amplifiers “actually
7 programmed... with... software to” perform the claimed function. But there is no
8 indication in the claims or specification that an “amplifier” should include
9 “software,” and a person of ordinary skill in the art would have understood that an
10 “amplifier configured to generate the sensing signal” would be implemented via an
11 amplifier component, not software, because amplifiers directly generate signals. Ex.
12 5 (Katona Decl.) at ¶ 34. Polaris is asking the Court to apply a uniform
13 interpretation of the scope of eight different claim limitations by construing
14 “configured to,” absent reference to the specific context of any of those claim terms.
15 This is incorrect: a person of ordinary skill in the art would look to the claims and
16 specification to see what configurations are described to understand what
17 “configured to” means. “Configured to” is context dependent based on what
18 component it modifies, as is consistent with its plain and ordinary meaning.

19 Polaris may point to language in the specification stating that the multiplier
20 can be implemented in software in support of its construction. Ex. 1 at 5:37-38. But
21 the multiplier is the *only* component that the ’117 specification describes as
22 potentially being implemented in software—in fact, this is the *only* discussion of
23 software in the specification. There is no discussion in the specification that
24 supports adopting a generic construction of “configured to” for the other
25 components such that any software implementation performing the recited function
26 should be covered by the claims. Similarly, claim 16, which depends from claim 15
27 (a method claim) recites that the *multiplying* step can be implemented via “software
28 algorithm”; there are no similar dependent claims stating that the other claimed steps

1 can be implemented using a software algorithm. That the multiplier is specifically
2 described and claimed as being implemented in software—but **not** the other claim
3 elements—dictates against broadening the other claimed components to include
4 software via a general, context-free construction of “configured to.”

5 Moreover, it is not a mistake or accidental omission that the specification
6 contains no support for a software implementation for the other components. The
7 specification describes hardware (but not software) implementations to provide the
8 function of the other claim elements at length; it describes arrangements of resistors,
9 diodes, buffer circuits, clamps, semiconductor switches, and amplifiers to achieve
10 the claimed functions for the ambient light sensor and dark level bias, for instance.
11 *See, e.g.* Ex. 1 at 2:54-4:4; 6:33-7:2 & Figs. 1, 2, 4-6, 8. But it does not even
12 mention software implementations as to these components.

13 Polaris is asking the Court to construe “configured to” in a vacuum, applying
14 teachings from the specification about the multiplier to the other claimed
15 components that comprise the “brightness control circuit.” This is inappropriate.
16 *Phillips*, 415 F.3d at 1314. The plain and ordinary meaning of “configured to” is
17 context dependent: for instance, a “hammer configured to hammer a nail” would
18 require a context-specific construction for “configured to,” just like here. Even if
19 the multiplier can be implemented with software, there is no evidence supporting a
20 definition of “configured to” that would include software implementations for the
21 other components. If Polaris wanted to read in broadening language to include
22 software for the multiplier circuit component, Polaris should have proposed the
23 “multiplier” term specifically for construction and proposed that software
24 implementations be included within the scope. Polaris should not be able to broaden
25 the scope of the other terms through a back-door construction of “configured to.”
26
27
28

C. Claim 1: “A Dark Level Bias Configured to Adjust the Combined Signal to Generate a Brightness Control Signal that is Used to Control a Brightness Level of a Visible Display”

VIZIO’s Construction	Polaris’s Construction
Indefinite	Plain and ordinary meaning

The phrase “a dark level bias configured to adjust the combined signal to generate a brightness control signal that is used to control a brightness level of a visible display” (the “dark level bias term”) is indefinite as used in the claims of the ’117 patent, including claim 1. As set out in Section 1 below, while language in claim 1 and portions of the specification suggest that the “dark level bias” is a component of the claimed “brightness control circuit,” other intrinsic evidence—including claim 1’s own dependents—characterize the dark level bias as a value or signal. The proper interpretation of a claim term requires considering all of the intrinsic evidence, including the dependent claims and the specification. *Phillips*, 415 F.3d at 1314 (holding dependent claims aid construction and “the specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term”). The conflict in the intrinsic evidence is irreconcilable in the context of the claims and renders it impossible for a person of ordinary skill in the art to discern the boundaries of the claim with reasonable certainty. Polaris, which suggests the term be given its “plain and ordinary meaning” but apparently intends to argue the “dark level bias” is a “value,” provides no way out of this conflict nor any information suggesting the term does in fact have a plain and ordinary meaning to one skilled in the art.

Moreover, even if this conflict can be resolved, claim 1 is indefinite because it violates basic principles of definiteness and claim drafting, as set forth in Sections 2 and 3 below. Specifically, as set out in Section 2, if a “dark level bias” is a “value” as Polaris apparently alleges, then it is indefinite because it would transform claim 1

1 into a mixed method-apparatus claim, which “run[s] headlong” into Federal Circuit
2 precedent finding such claims indefinite. *Power Integrations, Inc. v. ON*
3 *Semiconductor Corp.*, 2018 WL 5603631, at *17 (N.D. Cal. Oct. 26, 2018).² And,
4 as set out in Section 3, even if person of ordinary skill in the art could conclusively
5 resolve the conflicting evidence and determine the “dark level bias” term is a
6 component of the “brightness control circuit” of claim 1 (rather than a signal or
7 value), then it is indefinite under the law because claim 1 conflicts with the
8 unambiguous use of “dark level bias” in dependent claims 2, 4, and 5. In short,
9 there is no way to resolve the proper characterization of “dark level bias” without
10 rendering claim 1 indefinite.

11 **1. The “Dark Level Bias” Term Is Indefinite in the Asserted**
12 **Claims Because the Intrinsic Evidence Is Irreconcilable**

13 As an initial matter, the intrinsic evidence characterizes the “dark level bias”
14 term in conflicting ways that render the “dark level bias” term indefinite: (1) as a
15 component of the claimed circuit, versus (2) as a signal or value.

16 (a) *The Claims Characterize the “Dark Level Bias” In*
17 *Irreconcilable Ways*

18 Portions of claim 1 suggest that the “dark level bias” is a physical component
19 of the claimed “brightness control circuit.” Claim 1 is an apparatus claim
20 “comprising” four components of a “circuit,” and the “dark level bias” is recited as
21 one of the four components “configured to” perform a particular function. Ex. 1 at
22 cl. 1. This language suggests the “dark level bias” is a component (or arrangement
23 of components) of the circuit designed to perform the recited function. In particular,
24 in describing the claimed function, the claim states that the “dark level bias” is
25 “configured to adjust” the combined signal (the output of the multiplier) “to

26 ² See Ex. 3 (*Samsung* Claim Construction Order) at 23. Polaris stated it was not
27 deviating from this understanding of the term during the meet and confer process.
28

1 generate” a second signal: “a brightness control signal.” Ex. 1 at cl. 1.³ A person
2 of ordinary skill in the art would understand language such as “configured to adjust”
3 and “to generate a brightness control signal” to suggest that the “dark level bias”
4 should be characterized as an electrical component of the claimed “brightness
5 control circuit.” This is because components in a circuit adjust and generate signals.
6 Ex. 5 (Katona Decl.) at ¶ 43.

7 The dependent claims to claim 1, however, suggest to a person of ordinary
8 skill in the art that the “dark level bias” is a signal or value—in direct conflict with
9 its characterization as a physical component of the claimed apparatus in claim 1.
10 Ex. 5 (Katona Decl.) at ¶ 44. These claims recite that the “dark level bias” “is
11 provided to the multiplier” (claim 2), “is added to the combined signal” (claim 4), or
12 “is added to an output of the multiplier” (claim 5). Ex. 1 at cl. 2, 4, 5. In each case,
13 a person of ordinary skill in the art would not consider a component to be
14 “provided” or “added” to a multiplier or signal in the manner claimed—that is
15 consistent with characterizing “dark level bias” as a signal or value. Ex. 5 (Katona
16 Decl.) at ¶ 44. For instance, a person of ordinary skill in the art would understand
17 that by reciting that the “dark level bias” is provided to the multiplier, it is being
18 characterized as a signal or value because a multiplier does not act on another
19 component to adjust a signal—it acts as a signal or value. *Id.* Similarly, by reciting
20 that the “dark level bias” is “added to an output of the multiplier” or “added to the
21 combined signal,” the dependent claims suggest the “dark level bias” is capable of
22 being added to outputs/signals, which is not consistent with treating it as a
23 component of a circuit. *Id.*

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26 ³ Claim 15 is more ambiguous, reciting a method step of “adjusting the
27 combined signal with a dark level bias to generate a brightness control signal,”
28 which suggests either a physical component or signal. Ex. 1 at cl. 15.

(b) *The Specification and Prosecution History Characterize the “Dark Level Bias” In Irreconcilable Ways*

Similarly, the specification and prosecution history provide additional conflicting characterizations of “dark level bias,” in the same manner as the claims. For instance, the specification refers to the “dark level bias **circuit** [as] maintain[ing] the brightness control signal above a predetermined level...” Ex. 1 at 2:54-61 (emphasis added). Moreover, the applicants referred to a dark level bias “circuit” during prosecution when referring to the claim limitations in question: “Thus, in an embodiment, the dark level bias **circuit** ensures a predefined (or minimum) brightness in total ambient darkness.” Ex. 2 at POLARIS_0000435 (purporting to distinguish art reciting same characterization of the “dark level bias circuit”). A person of ordinary skill in the art would understand the references to a “circuit” to suggest a physical component, because that is consistent with the common understanding of the term and because physical implementation necessary to a maintain signals and perform electrical functions. Ex. 5 (Katona Decl.) at ¶ 45.

The specification, however, also includes passages suggesting that the “dark level bias” is a signal or value. For instance, the specification refers to a summing circuit that adds (as a value) its product to the “dark level bias,” which is adjusted (like a signal) by a circuit: “a summing circuit 104 adds the product to a dark level bias (DARK LEVEL BIAS) that has been adjusted by scalar circuit k1 (100).” Ex. 1 at 5:22-25; *see also* 6:9-12 (“dark bias level”); 7:28-30 (discussing as value); Ex. 5 (Katona Decl.) at ¶ 46. The specification also further discusses “providing” a “dark bias level” as if it is a signal. Ex. 1 at 7:31-48; Fig. 4. Specifically, in reference to Fig. 4, the specification states a “network of resistors” including element 412 “helps to provide the dark bias level,” and describes an implementation using a “first resistor 412 [which] serves to direct some current from the input buffer circuit 410 to the output in total ambient darkness.” Ex. 1 at 7:31-48. A person of ordinary skill would understand this passage to characterize the dark level bias an output of

1 the other components (*i.e.*, resistors), rather than as a component itself, because the
2 language suggests that the components “provide” the “dark level bias” as a voltage
3 or signal, not that they “provide” a component. *Id.*; Ex. 5 (Katona Decl.) at ¶ 46.⁴

4 (c) *The Conflicting Characterizations of “Dark Level Bias” in*
5 *the Intrinsic Evidence Render the Term Indefinite*

6 “[A] construction that stays true to the claim language and most naturally
7 aligns with the patent’s description of the invention will be, in the end, the correct
8 construction.” *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1250
9 (Fed. Cir. 1998). Here, no such construction is possible. The claims and
10 specification provide no way to resolve the conflicting characterizations in the
11 intrinsic evidence. In such a situation, the claim term is indefinite because, when
12 “viewed in light of the specification and prosecution history, [it fails to] inform
13 those skilled in the art about the scope of the invention with reasonable certainty.”
14 *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014). In
15 particular, where the description of a claim element is “materially inconsistent ... a
16 person of ordinary skill in the art would not be reasonably certain as to which of the
17 patentee’s two inconsistent definitions...” is used in the claims. *Infinity Computer*
18 *Prod., Inc. v. Oki Data Americas, Inc.*, 2019 WL 2422597, at *5 (D. Del. June 10,
19 2019); *see also Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 789 F.3d 1335, 1341 (Fed.
20 Cir. 2015) (holding claim term indefinite where patentee used two inconsistent
21 characterizations of term during prosecution).

22
23
24 ⁴ Additionally, while there is no plain and ordinary meaning for the term “dark
25 level bias,” the use of the term “bias” in the claims in general suggests applying or
26 establishing set voltages in an electronic circuit for the purpose of establishing
27 proper operating conditions. Ex. 5 (Katona Decl.) at ¶ 39. A “bias circuit” (or
28 “bias”) is the term for a circuit that applies such a voltage, further adding to the
confusion in the claims and specification. *Id.*

1 The situation here is similar to that presented in *Transcend Medical, Inc. v.*
2 *Glaukos Corporation*, 2015 WL 5546988 (D. Del. Sept. 18, 2015). There, the court
3 found the claim term “choroid” was indefinite where the specification and
4 prosecution history provided multiple inconsistent and conflicting characterizations
5 of the term. *Id.*, at *6. As the court there agreed, “the term ‘choroid’ is invalid
6 because the patents-in-suit define the term in multiple inconsistent ways.” *Id.*, at *5.
7 Even though the parties agreed that there was a plain and ordinary meaning for the
8 term and the “patents-in-suit at times define[d] ‘choroid’ consistent with the term’s
9 plain and ordinary meaning” in some cases, “the patents-in-suit also define[d]
10 ‘choroid’ in two additional ways rendering the term indefinite.” *Id.*, at *6.

11 Like the *Transcend Medical* case, the intrinsic evidence in the ’117 patent
12 characterizes the “dark level bias” term in conflicting ways. A person of ordinary
13 skill in the art would not have considered a component of a circuit to be a signal or
14 value, or a signal or value to be a component of a circuit. Ex. 5 (Katona Decl.) at ¶
15 47. The situation presented here is worse than that presented in *Transcend Medical*,
16 however, because, there is no plain and ordinary meaning of the claim term from
17 which to start. *Id.*

18 The “dark level bias” term is indefinite as used in the claims of the ’117
19 patent, including claim 1. The claims and specification give conflicting descriptions
20 that are irreconcilable in the context of the claims and render it impossible for a
21 person of ordinary skill in the art to discern the boundaries of the claim with
22 reasonable certainty.

23 **2. Alternatively, to the Extent the “Dark Level Bias” Term in**
24 **Claim 1 Is a Value or Signal, It Is Indefinite Because It**
25 **Renders Claim 1 a Mixed Method-Apparatus Claim**

26 Alternatively, to the extent “dark level bias” is read to be a value as Polaris
27 apparently proposes, claim 1 is indefinite because the “dark level bias” claim
28 limitation would be transformed into a purely functional limitation, without reciting

1 any structure for generating the signal or value that performs the claimed function.
2 This turns the claim into a mixed-method apparatus claim under the law, rendering it
3 indefinite.⁵

4 Specifically, inserting Polaris’s definition into the full claim term renders the
5 claim language as follows: “~~dark level bias~~ a value configured to adjust the
6 combined signal to generate a brightness control signal that is used to control a
7 brightness level of a visible display....” As is apparent, by replacing the “dark level
8 bias” term with “a value,” Polaris’s apparent construction would render the claim
9 language entirely functional, because a value (or signal) is not a structural
10 component—it is generated by structure—and the remainder of the claim language
11 in this limitation (“configured to adjust the combined signal to generate a brightness
12 control signal that is used to control a brightness level of a visible display”) is purely
13 functional. Ex. 5 (Katona Decl.) at ¶ 49. The “dark level bias” is the only possible
14 structure recited in the claim limitation for performing the recited function. *Id.*

15 Reading “dark level bias” out thus means there is no recited structure for
16 generating the signal or value, or for performing the claimed “adjusting” and
17 “generating” functions, yet claim 1 is an apparatus claim. “[A]pparatus claims
18 cover what a device is, not what a device does.” *Hewlett-Packard Co. v. Bausch &*
19 *Lomb Inc.*, 909 F.2d 1464, 1468 (Fed. Cir. 1990). Thus the Federal Circuit has held
20 that an apparatus claim that recites a functional step (rather than a structure of the
21 apparatus) is indefinite for mixed method-apparatus claiming. *See, e.g., IPXL*
22 *Holdings, LLC v. Amazon. com, Inc.*, 430 F.3d 1377, 1383 (Fed. Cir. 2005)
23 (“[R]eciting both an apparatus and a method of using that apparatus renders a claim
24 indefinite under section 112, paragraph 2.”); *Rembrandt Data Technologies, LP v.*
25 *AOL, LLC*, 641 F.3d 1331, 1338-39 (Fed. Cir. 2011).

26
27 ⁵ Claim 15 is not indefinite on this ground, because it is a method claim.
28

1 Claim 1 here is highly similar to those found indefinite for mixed method-
2 apparatus claiming in *Power Integrations, Inc. v. ON Semiconductor Corp.*, 2018
3 WL 5603631(N.D. Cal. Oct. 26, 2018). There, the apparatus claim recited a
4 “regulator circuit” comprising an “input,” a “switch” for receiving a control signal,
5 and an “oscillator,” along with a fourth element: “said control signal being provided
6 when no feedback signal is provided at said feedback input and said duty cycle
7 signal is in said high state.” *Id.*, at *15. The court held that “[a]s written, the claim
8 requires that the control signal ‘be provided’ under certain conditions. There is no
9 recited structure in the claim that arguably provides that signal.” *Id.*, at *17. As
10 such, the court found that “the functional language is not tied to the capability of any
11 associated structures. Instead, the disputed term must be read as functional language
12 constituting a method of the apparatus.” *Id.* Thus the court found that this “would
13 run headlong into” the Federal Circuit’s ban on mixed method-apparatus claiming.
14 *Id.* (citing *IPXL*, 430 F.3d at 1383); *see also Bushnell Hawthorne, LLC v. Cisco*
15 *Systems, Inc.*, 2019 WL 2745735, at *7-9 (E.D. Va. July 1, 2019) (claim limitation
16 in an apparatus claim reciting “wherein the system further comprises maintaining a
17 list of bit strings or character sets” was indefinite under *IPXL* since “maintaining”
18 recited a method step even if the maintaining was done by apparatus); *Aventis*
19 *Pharma S.A. v. Hospira, Inc.*, 2010 WL 3842273, at *16-18 (D. Del. Sept. 27, 2010)
20 (where claim recited compositions and “subsequent use” of compositions to create
21 an “injectable solution,” reading language as a step or process limitation resulting in
22 “two separate statutory classes of invention” that were “impermissibly mixed”).

23 Here, if “dark level bias” is read to be a signal or value, the issue with the
24 claim is the same as that presented in *Power Integrations*. The “dark level bias”
25 claim limitation would merely recite a value or signal that is “configured to adjust
26 the combined signal to generate a brightness control signal” that is further “used to
27 control a brightness level of a visible display.” Ex. 1 at cl. 1. “There is no recited
28 structure in [claim 1] that arguably provides that signal. . . . As such the functional

1 language [of claim 1] is not tied to the capability of any associated structures.”
2 *Power Integrations*, 2018 WL 5603631, at *17.

3 Thus, claim 1 suffers from precisely the lack of clarity that drove the Federal
4 Circuit’s decisions in the key cases holding mixed method-apparatus claims
5 indefinite: it is not clear when the mixed subject matter claim would be infringed—
6 when the system is created or when it is put into operation under certain conditions.
7 *IPXL*, 430 F.3d at 1383 (“a manufacturer or seller of the claimed apparatus would
8 not know from the claim whether it might also be liable for contributory
9 infringement because a buyer or user of the apparatus later performs the claimed
10 method of using the apparatus”); *Rembrandt*, 641 F.3d at 1338-39. “Claiming a
11 result without reciting what materials produce that result is the epitome of an
12 indefinite claim.” *Forest Labs., Inc. v. Teva Pharm. USA, Inc.*, 716 Fed. Appx. 987,
13 996 (Fed. Cir. 2017) (Lourie J., concurring)). Thus, to the extent “dark level bias”
14 is understood to be a value or signal, claim 1 is indefinite on this ground.

15 **3. Alternatively, to the Extent the “Dark Level Bias” Term in**
16 **Claim 1 Is A Circuit Component, It Is Indefinite Because**
17 **Claim 1 Would Conflict with the Corresponding Dependents**

18 Alternatively, even if person of ordinary skill in the art could conclusively
19 resolve the conflicting evidence and determine that the “dark level bias” term is a
20 component of the “brightness control circuit” of claim 1 (not a signal or value), then
21 it is indefinite under the law because claim 1 conflicts with the characterization of
22 “dark level bias” in dependent claims 2, 4, and 5.

23 Dependent claims 2, 4, and 5 recite that the “dark level bias” “is provided to
24 the multiplier” (claim 2), “is added to the combined signal” (claim 4), or “is added
25 to an output of the multiplier” (claim 5). Ex. 1 at cl. 2, 4, 5. In each case, a person
26 of ordinary skill in the art would understand that “providing” the “dark level bias” to
27 the multiplier or “adding” the “dark level bias” to the signal or output is not
28 consistent with characterizing the “dark level bias” as a component because a

1 component cannot be sensibly said to be provided to another component or added to
2 a signal. Ex. 5 (Katona Decl.) at ¶ 44. Instead, a person of ordinary skill in the art
3 would understand that the language of the dependent claims is consistent with
4 characterizing the “dark level bias” as a signal or value, which would commonly be
5 “provided” to another component or “added” to another signal. *Id.*

6 An independent claim that conflicts with its dependents in this manner is
7 invalid as indefinite.⁶ For instance, in *Loyalty Conversion Systems Corp. v.*
8 *American Airlines, Inc.*, 2014 WL 4352489 (E.D. Tex. Sept. 2, 2014), the court
9 found that the claim limitation “the at least one of the one or more computers” for
10 performing three functions was indefinite because the most plausible construction of
11 the claim was inconsistent with a corresponding dependent claim. *Id.*, at *5.
12 Specifically, the court found that “[b]ased on the language of claim 31 [the
13 independent claim] standing alone, the Court would be prepared to construe that
14 claim to mean that a computer performing the ‘accepting’ function would also have
15 to perform the ‘detecting’ function, or the ‘granting’ function, or both.” *Id.* But the
16 court reasoned that “the language of claim 31 does not stand alone,” and would be
17 inconsistent with one of its dependents—claim 37—which required that the three
18 “accepting,” “detecting,” and “granting” functions be performed by three different
19 computers. *Id.* Thus, as the court found under *Nautilus*, it was not allowed “to
20 ignore the patentee’s obviously conscious decision” to use the conflicting
21 independent and dependent language. *Id.* Because “the Court [was] left to guess at
22 the meaning” of the claim in light of this inconsistency, the claim “would not

23
24
25 ⁶ Claim 15 presents a similar issue if “dark level bias” is read to be a
26 component, as dependent claims 17 and 18 recite “wherein the dark level bias is
27 added to the sense signal before selective multiplication” and “wherein the dark
28 level bias is added to the combined signal after selective multiplication.” Ex. 1 at
cls. 17 & 18. *See* Section II.C.1.

1 ‘inform those skilled in the art about the scope of the invention with reasonable
2 certainty’” and was indefinite. *Id.*; see also *MONKEYmedia, Inc. v. Apple, Inc.*,
3 2015 WL 4758489, *11-13 (W.D. Tex. Aug. 11, 2015) (conflict between
4 independent and dependent claims, among other issues, rendered claims
5 “nonsensical” and “incoherent” and resulted in a claim that was “fundamentally
6 inconsistent” such that it was indefinite).

7 The same analysis holds here. If “dark level bias” is read to be a component
8 of the “brightness control circuit” of claim 1 (and not a signal or value), then a
9 person of ordinary skill in the art could not ignore the “obviously conscious
10 decision” to characterize it as a value or signal in the dependent claims. A person of
11 ordinary skill in the art would be left to “guess at its meaning”—rendering its scope
12 less than reasonably certain.

13 **D. Dependent Claims 2, 4, and 5**

- 14 1. **Claim 2: “Wherein the Dark Level Bias Is Provided to the**
15 **Multiplier Such That the Amount of Adjustment to the**
16 **Combined Signal is Dependent on the User Selectable**
17 **Brightness Setting”**
- 18 2. **Claim 4: “Wherein the Dark Level Bias Is Added to the**
19 **Combined Signal Such That the Amount of Adjustment to**
20 **the Combined Signal is Independent of the User Selectable**
21 **Brightness Setting”**
- 22 3. **Claim 5: “Wherein the Dark Level Bias Is Added to an**
23 **Output of the Multiplier”**

VIZIO’s Construction	Polaris’s Construction
Indefinite	Plain and ordinary meaning

24 Each of dependent claims 2, 4, and 5 is indefinite for three reasons.

25 **First**, The “dark level bias” term in claim 15 is indefinite. for the reasons set
26 forth in Section II.C.1. **Second**, as set out above, if the “dark level bias” term is read
27 to be a component (and not a signal or value), then the dependent claims are
28 indefinite because they characterize the “dark level bias” as a signal or value, in

1 conflict with the characterization of “dark level bias” in claim 1, from which they
2 depend. *See* Section II.C.2; Ex. 5 (Katona Decl.) at ¶¶ 50, 52, 54; *Loyalty*, 2014 WL
3 4352489, at *5; *MONKEYmedia*, 2015 WL 4758489, at *11-*13.

4 ***Third***, separate from the conflicting characterizations of “dark level bias” in
5 the intrinsic evidence, the dependent claim limitations recite completely functional
6 steps for providing the signal or value to other components, turning the dependent
7 limitations into method steps that depend from an apparatus claim and rendering
8 them indefinite. *See* Section II.C.3; *IPXL*, 430 F.3d at 1383 (holding patent claims
9 indefinite because patentees may not mix statutory classes by claiming
10 simultaneously an apparatus and the method of using the apparatus). Specifically,
11 the dependent claims recite that “the dark level bias ***is provided*** to the multiplier,”
12 “the dark level bias ***is added*** to the combined signal,” and “the dark level bias ***is***
13 ***added*** to an output of the multiplier.” These are unequivocally method steps, not
14 elements of an apparatus claim. *Rembrandt*, 641 F.3d at 1338-39.

15 The dependent claims are thus very similar to those invalidated in *Bushnell*
16 *Hawthorne*, 2019 WL 2745735 and *Power Integrations*, 2018 WL 5603631. In
17 *Bushnell*, an apparatus claim contained a claim limitation that recited “wherein the
18 system further comprises ***maintaining a list*** of bit strings or character sets.” *Id.*, at
19 *6. The court found this rendered the claim indefinite under *IPXL* since
20 “maintaining” recited a method step (even if the “maintaining” was done by
21 apparatus). *Id.* Similarly, in *Power Integrations*, the court found that the language
22 “said control signal being provided when...” to be indefinite because it recited a
23 method step by specifying a signal “is provided” under certain conditions. 2018 WL
24 5603631, at *16; *see also Aventis Pharma*, 2010 WL 3842273, at *16-18 (where
25 claim recited compositions and “further subsequent use” of the compositions to
26 create an “injectable solution,” reading language as a step or process limitation
27 resulting in “two separate statutory classes of invention” that were “impermissibly
28 mixed”).

Here, the dependent claims recite that the “dark level bias” “is added” or “is provided” to other components—reciting a method step in the same way as *Bushnell* and *Power Integrations*. Thus, by mixing a method step into an apparatus claim, they “make it unclear as to when infringement occurs: when one makes the apparatus or when the user performs the claimed method.... Such ambiguity ‘does not apprise a person of ordinary skill in the art of [the claim’s scope].’” *Power Integrations*, 2018 WL 5603631, at *16 (quoting *IPXL*, 430 F.3d 1384). The dependent claims are thus indefinite mixed method-apparatus claims.

E. Claim 15: “Adjusting the Combined Signal with a Dark Level Bias to Generate a Brightness Control Signal for Controlling Brightness of a Visible Display”

VIZIO’s Construction	Polaris’s Construction
Indefinite	Plain and ordinary meaning

The “dark level bias” term in claim 15 is indefinite for the reasons set forth in Section II.C.1 as to claim 1: the claims and specification give conflicting characterizations of what a “dark level bias” is, alternatively describing it as an element of the claimed circuit versus an electrical signal or a value. These conflicts are irreconcilable and render it impossible for a person of ordinary skill in the art to discern the boundaries of the claim with reasonable certainty. Claim 15 provides no additional clarity impacting the analysis in Section II.C.1.⁷

Additionally, as noted in Section II.C.3, even if person of ordinary skill in the art could conclusively resolve the conflicting evidence and determine that the “dark level bias” term is a component in claim 15 (not a signal or value), then claim 15 is indefinite under the law because claim 15 conflicts with the characterization of “dark level bias” in dependent claims 17 and 18. Dependent claims 17 and 18 recite

⁷ Claim 15 would not be rendered indefinite on the grounds presented in II.C.2 (mixed method-apparatus), because it is a method claim.

“wherein the dark level bias is added to the sense signal before selective multiplication” and “wherein the dark level bias is added to the combined signal after selective multiplication.” Ex. 1 at cls. 17 & 18. For the reasons set out in Section II.C.3, this language would be understood by a person of ordinary skill to characterize the dark level bias as a signal or value. To the extent “dark level bias” is thus read to be a component, the independent and dependent claims conflict.

F. Claim 18: “Wherein the Dark Level Bias Is Added to the Combined Signal After Selective Multiplication Such That the Amount of Adjustment to the Combined Signal is Independent of the Input Signal and the Sense Signal”

VIZIO’s Construction	Polaris’s Construction
Indefinite	Plain and ordinary meaning

The “dark level bias” term in claim 18 is indefinite for the same reasons it is indefinite in claims 1 and 15. Additionally, as with dependent claims 2, 4, and 5, to the extent the “dark level bias” term is construed to be a component in claim 15, dependent claim 18 characterizes the “dark level bias” as a signal or value—not a component. It is thus indefinite for the reasons set out in Section II.C.2.

G. Claims 1, 15: “The Brightness Control Signal Is Maintained Above a Predetermined Level When the Ambient Light Level Decreases to Approximately Zero”

VIZIO’s Construction	Polaris’s Construction
Indefinite	Plain and ordinary meaning

In order to determine whether this claim limitation is met, a person of ordinary skill in the art would have to measure whether “the ambient light level decreases to approximately zero” to determine if the brightness control signal is maintained above a “predetermined level” under that condition. There are two reasons why this determination could not be made with reasonable certainty, rendering the claim indefinite. Ex. 5 (Katona Decl.) at ¶¶ 57-61.

First, the claims and specification do not explain how to determine when the

1 ambient light level is “approximately zero.” Ex. 5 (Katona Decl.) at ¶¶ 58-59. A
2 person of ordinary skill in the art would have understood what constitutes “total
3 ambient darkness” in the context of the patent, but the claims and specification give
4 no guidance for what constitutes “approximately zero” or how to measure it—
5 whether that includes 0.1 lux, 1 lux, 10 lux, or 100 lux. *Id.* at ¶ 60. Thus, there is no
6 way to know how to measure whether this condition is met. When a patent claim
7 uses a term of degree that creates this type of uncertainty, the specification must
8 provide guidance for measuring the term or the term is indefinite. *See Interval*
9 *Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1370-71 (Fed. Cir. 2014); *GE Lighting*
10 *Sols., LLC v. Lights of Am., Inc.*, 663 Fed. Appx. 938, 940 (Fed. Cir. 2016) (finding
11 “elongated” indefinite because, where term of degree is used, the patent must
12 provide some standard for measuring that degree such that the claim language
13 provides enough certainty to one of skill in the art when read in the context of the
14 invention.”). The specification fails to meet this requirement because it is silent
15 concerning the appropriate method of measuring when the ambient light level
16 “decreases to approximately zero.” Ex. 5 (Katona Decl.) at ¶ 59.

17 In fact, in reference to measuring ambient light levels in the context of the
18 claims, a person of ordinary skill in the art would understand that what constitutes
19 “approximately zero” would vary significantly with the sensitivity of the detection
20 instrument and the method employed. Ex. 5 (Katona Decl.) at ¶ 60. This is
21 significant, because the dependent claims to claim 1 (as well as the specification)
22 describe different hardware implementations for the “light sensor,” including “full
23 spectrum PIN diodes” and “infrared PIN diodes,” but claims 1 and 15 are not
24 expressly limited to these sensors. Ex. 1 at cl. 1, 13. But even when considering
25 just those sensors, what ambient light level might constitute “approximately zero”
26 would vary significantly depending on how they are deployed (the claim is not
27 limited to a single implementation), how many are deployed, their sensitivity, and
28 the spectrum of the light they are detecting. Ex. 5 (Katona Decl.) at ¶ 60.

1 When a patent gives only guidance as to an absolute—such as “total ambient
2 darkness”—but no guidance as to a term of degree, the claim term is indefinite. For
3 instance, in *Berkheimer v. HP Inc.*, 881 F.3d 1360 (Fed. Cir. 2018), the Federal
4 Circuit held the district court proper ruled claims indefinite because they cited a
5 term of degree but only gave guidance as to an absolute. *Id.* at 1363-64. There, the
6 meaning of the term “minimal redundancy” was at issue. *Id.* The specification
7 referred to “minimiz[ing] redundant objects,” “eliminating redundancy,” and
8 “reducing redundancies” in an archive. *Id.* at 1364. But “[t]he only example
9 included in the specification [for guidance was] an archive that exhibits no
10 redundancy.” *Id.* Because the claim language did “not require elimination of all
11 redundancies from the archive,” the Federal Circuit thus affirmed that the district
12 court properly found the claim indefinite because of “the lack of objective boundary
13 or specific examples of what constitutes ‘minimal’ in the claims, specification, and
14 prosecution history....” *Id.*; see also *Geodynamics, Incorporated v. Dynaenergetics*
15 *US, Inc.*, 2016 WL 6217181, at *15-*16 (E.D. Tex. Oct. 25, 2016) (term
16 “substantially equal to the total depth of penetration: was indefinite because the
17 specification did not provide any guidance as to what was “substantially equal” and
18 what was not where the only relevant instances of the limitation described scenarios
19 that were “equal” and not something that was “substantially equal”).

20 Here, the intrinsic evidence fails entirely to give any objective boundary for
21 measuring whether “the ambient light level decreases to approximately zero” to
22 determine if the brightness control signal is maintained above a “predetermined
23 level” at that point. Ex. 5 (Katona Decl.) at ¶ 59. At most, it discusses “total
24 ambient darkness,” with no guidance on what ambient light levels constitute
25 “approximately zero.” *Id.* It is indefinite.

26 **III. CONCLUSION**

27 For the foregoing reasons, VIZIO requests that the Court adopt VIZIO’s
28 proposals for the nine terms at issue from the ’117 patent.

1 DATED: September 13, 2019 Respectfully submitted,
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4 By/s/ Zachariah Summers

5 Zachariah Summers

6 Attorney for Defendant

7 VIZIO, Inc.
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